REMARKS

Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Harms et al (U. S. Patent No. 6,493,376), hereinafter referred to as Harms.

The Examiner states that regarding claims 1 and 42, Harms discloses, in reference to Fig. 1, "a method for processing communications in a satellite telecommunications system" (col. 1, lines 12-20), comprising the steps of:

- providing a gateway and a satellite (14 and 16) coupled together through at least one feeder link (42, 46 and 48, forward link, col. 2, lines 40-45), said feeder link conveying a plurality of channel blocks, (refer to Fig. 1, col. 7, lines 20-32, "channelizing codes", col. 1, line 66 to col. 2, line 5);
- code division multiplexing each of said plurality of channel blocks using a predetermined spreading waveform selected to indicate an origin and a destination of each of said plurality of channel blocks (channelizing orthogonal code using PN chip rate, refer to col. 2, lines 3-20);
- transmitting said code division multiplexed channel blocks; and routing said individual ones of said channel blocks to their destination in accordance with the individual predetermined spreading waveforms ("The system users communicate through gateways and satellites, or terrestrial base stations (also referred to as cell-sites or cells) using CDMA spread spectrum communication signals", refer to col. 1, lines 40-45, using preselected PN spreading code -- modulation signals, refer to col. 4, lines 40-45, col. 4, lines 53-55.

Applicants respectfully submit that at col. 1, lines 12-20 of Harms there is stated "The present invention relates to spread spectrum communication systems, such as wireless data or telephone systems, and satellite communication systems. More particularly, the invention relates to a method and apparatus for generating, identifying, and acquiring spread spectrum communication signals using layered or overlayed PN spreading and identifier codes having differing periods or chip rates."

Applicants respectfully submit that at col. 2, lines 40-49 there is stated "Typical CDMA spread spectrum communication systems contemplate the use of coherent modulation and demodulation techniques for forward link user terminal communications. In communication systems using this approach, a 'pilot' signal (or other known signal) can be used as a coherent phase reference for gateway- or satellite-to-user and base station-to-user links. That is, a pilot signal, which typically contains no data modulation, is transmitted by a base station or gateway throughout a given region of coverage." Further, Applicants respectfully submit at col. 7, lines 20-32 relied upon by the Examiner it is recited

"An exemplary wireless communication system, such as a wireless telephone system, in which the present invention is used is illustrated in Fig. 1. Communication system 10 illustrated in Fig. 1 uses spread spectrum modulation techniques in communicating between remote or mobile user terminals and system gateways or base stations. In the portion of the communication system illustrated in Fig. 1, one base station 12 and two satellites 14 and 16, and two associated gateway or hubs 24 and 26 are shown for effecting communications with two mobile stations or user terminals 20 and 22, or other stations. The present invention may be useful in either or both satellite or terrestrial based communication systems, as will be readily apparent to those skilled in the art." Further, at col. 1, line 66 to col. 2, line 5 there is stated "In a typical CDMA spread-spectrum communication system, channelizing codes are used to discriminate between signals intended for different users within a cell or between user signals transmitted within a satellite beam, or sub-beam, on a forward link. That is, each user transceiver has its own orthogonal channel provided on the forward link by using a unique 'covering' or 'channelizing' orthogonal code."

Applicants respectfully submit that no where in these recitations is there taught, suggested or implied providing a plurality of channel blocks which are code division multiplexed using a predetermined spreading waveform selected to indicate an origin and a destination of each of said plurality of channel blocks and thereafter transmitting the CDMA channel blocks to their destination in accordance with individual predetermined spreading waveform.

Harms is directed to "A technique for spreading information signals in a spread spectrum communication system to provide increased signal acquisition speed. A first PN spreading code or code set is used to spread information signals along with a second PN spreading code sequence or function. The second PN code is synchronized with the first PN spreading code, but has a larger code period so that each code chip of the second PN code extends over the entire period of the first PN code. The longer period spreading code forms an outer code which helps provide unambiguous beam identification and easily acquired frame timing in the presence of dynamically changing signal path delay, improving signal acquisition."

Applicants respectfully submit that they provide a method for processing communications in a satellite telecommunications system which employs channel blocks comprised of numerous code division multiple access channels possibly of various bandwidths that are frequency division multiplexed together which are then code division multiplexed employing a predetermined spreading waveform selected to indicate an origin and a destination of each of the plurality of channel blocks and thereafter transmitting the CDMA multiplexed channel blocks to their destination in accordance with an individual

predetermined spreading waveform. This system and method are no where taught, suggested or implied in Harm '376.

Further, Applicants respectfully submit that at col. 2, lines 3-20 there is disclosed that the user transceiver has its own orthogonal channel provided on the forward link by using a unique covering or channelizing orthogonal code. Walsh functions are generally used to implement the channelizing codes....PN code based modulation techniques used in CDMA signal processing allow spectrally similar communication signals to be quickly differentiated. This allows signals traversing different propagation paths to be readily distinguished from each other, provided path length differential causes relative propagation delays in excess of the PN code chip period. Applicants respectfully submit that this does not teach, suggest or imply employing a predetermined spreading waveform selected to indicate an origin and a destination of each of the plurality of channel blocks as required by claims 1 and 42.

Further, with regard to bullet three at col. 1, lines 40-45, Applicants respectfully conclude there is merely disclosed "The system users communicate through gateways and satellites, or terrestrial base stations (also referred to as cell-sites or cells) using CDMA spread spectrum communication signals.

"In a typical spread-spectrum communication system, one or more sets or pairs of preselected pseudorandom noise (PN) code sequences are used to modulate or 'spread' user information signals over a predetermined spectral band prior to modulation onto a carrier for transmission as communication signals." Applicants respectfully submit this does little to cure the deficiencies as noted above with regard to the channel blocks employing the spreading waveform to indicate an origin and a destination of each of plurality of channel blocks and thereafter transmitting in accordance with the predetermined spreading waveform as required by claims 1 and 42. Furthermore, Applicants respectfully submit at col. 4, lines 40-45 and at col. 4, lines 53-55 there is disclosed "digital information signals are bandwidth spread using a preselected pseudorandom noise (PN) spreading code to produce spread spectrum modulation signals. An exemplary communication system is a wireless data or telephone system that uses multiple satellite repeaters to receive communication signals from gateway type base stations and transfer them to one or more of a plurality of mobile or portable stations having receivers...The encoded signals may be combined with one or more orthogonal functions to provide channelization of the information signals." Applicants respectfully submit that this does little to cure the above-noted deficiencies at those passages relied upon by the Examiner which have been discussed above.

The Examiner goes on to state that with regard to claims 2-4, Harms discloses the following limitations:

- wherein said at least one feeder link is a return feeder link, as in claim 2, refer to 42, 46 and 48, col. 8, lines 15-18.
- wherein said at least one feeder link is a forward feeder link, as in claim 3, refer to 42, 46 and 48, col. 8, lines 15-18.
- wherein said destination comprises at least a beam of a forward service link, as in claim 4, refer to col. 2, lines 2-5, col. 9, line 2.

Applicants respectfully submit that at col. 8, lines 15-18 of Harms there is disclosed "The arrowheads on these lines illustrate exemplary signal directions for each communication link, as being either a forward or a reverse link, and are present only for purposes of clarity and not as indicating any actual signal patterns or physical restrictions." Although Applicants do not necessarily agree that at least one feeder link is a return feeder link as recited in this recitation and further seen in elements 42, 46 and 48, claim 2 is patentably distinguishable over Harms for the reasons recited above with regard to claim 1 which are hereby respectfully incorporated by reference.

Applicants respectfully submit that at col. 8, lines 15-18 set out above and further in the Examiner's reference elements 42, 46 and 48, Applicants do not necessarily agree that at least one feeder link is seen to be a forward feeder link as contended by the Examiner. However, claim 3 is nevertheless patentably distinguishable over Harms for the reasons set out above with regard to claim 1 which are hereby respectfully incorporated by reference.

With regard to claim 4, at col. 2, lines 2-5 and col. 9, line 2, wherein it is stated, respectively, "That is, each user transceiver has its own orthogonal channel provided on the forward link by using a unique 'covering' or 'channelizing' orthogonal code." and "For satellite systems, this signal is transferred within each satellite 'beam' and originates with gateways being serviced by the satellite.", Applicants do not necessarily agree as the Examiner contends that this recites a destination comprising at least beam of a forward service link; nevertheless, claim 4 is seen to be patentably distinguishable over Harms for reasons disclosed above with regard to claim 1 which are hereby respectfully incorporated by reference.

Applicants gratefully acknowledge that claims 5-8 and 19-22 are allowed.

Applicants gratefully acknowledge that the Examiner has indicated that claims 9-18 and 23-42 would be allowable if claims 13, 18, 25, 32, 37 and 38 are rewritten to overcome the rejections under 35 U.S.C. 112, 2nd paragraph, set forth in this Office Action and to include all of the limitations of the base claim and any intervening claims. Applicants have amended claims 13, 18, 25, 32, 37 and 38 as suggested by the Examiner, thereby obviating the rejections under 35 U.S.C. 112 and rendering said claims allowable.

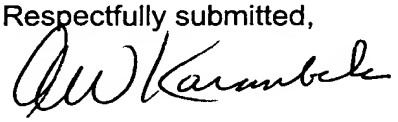
Claims 5, 6, 9, 19, 28, 30 and 33 have also been amended to correct typographical errors only.

The specification at page 4, beginning at line 22, has been amended to fill up the blank space with serial number, date and the current status as requested by the Examiner.

In view of the above remarks and amendments, Applicants respectfully submit that all of the claims presently under prosecution have been seen to contain patentable subject matter and to be patentably distinguishable over the prior art of record.

Accordingly, Applicants respectfully request that this application be reviewed and reconsidered in view of the above remarks and amendments and that a Notice of Allowance be issued at an early date.

Respectfully submitted,



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